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L2: Entry 2 of 2

File: JPAB

Nov 6, 2001

PUB-NO: JP02001310491A  
DOCUMENT-IDENTIFIER: JP 2001310491 A  
TITLE: IMAGING METHOD

PUBN-DATE: November 6, 2001

## INVENTOR-INFORMATION:

NAME

COUNTRY

KONNO, TAKESHI

HATAKEYAMA, AKIRA

KAWAGOE, SHIGEKI

## ASSIGNEE-INFORMATION:

NAME

COUNTRY

FUJI PHOTO FILM CO LTD

APPL-NO: JP2000129445

APPL-DATE: April 28, 2000

INT-CL (IPC): B41 J 2/32; B41 M 5/26; B41 M 5/40

## ABSTRACT:

PROBLEM TO BE SOLVED: To provide an imaging method in which a high resolution image having good image quality and no reverse, and a transfer image having a good color tone can be formed without providing a transfer material or an image receiving material with a cushion layer.

SOLUTION: The coloring material layer side of a transfer material comprising a translucent support, a translucent conductive layer, a photothermal conversion layer and a coloring material layer is charged by corona discharge and superposed on the image receiving layer side of an image receiving material comprising a support and an image receiving layer. Laser light is then irradiated imagewise from the transfer material side and the coloring material layer of transfer material is transferred to the surface of the image receiving layer thus forming an image on the surface of the image receiving layer.

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L2: Entry 1 of 2

File: JPAB

Nov 27, 2001

PUB-NO: JP02001328287A  
DOCUMENT-IDENTIFIER: JP 2001328287 A  
TITLE: MULTICOLOR IMAGING METHOD

PUBN-DATE: November 27, 2001

## INVENTOR-INFORMATION:

NAME

COUNTRY

WACHI, NAOTAKA

MIYAKE, KAZUHITO

## ASSIGNEE-INFORMATION:

NAME

COUNTRY

FUJI PHOTO FILM CO LTD

APPL-NO: JP2000150875

APPL-DATE: May 23, 2000

INT-CL (IPC): B41 J 2/32; B41 J 31/00; B41 J 31/05; G03 F 3/10

## ABSTRACT:

PROBLEM TO BE SOLVED: To provide a multicolor imaging method in which an image having good image quality and stabilized transfer density can be obtained even when laser recording is performed using high energy laser light of multibeam two-dimensional arrangement under different temperature and humidity conditions.

SOLUTION: An image receiving sheet having an image receiving layer, and four kinds of thermal transfer sheet of yellow, magenta, cyan and black having at least a photothermal conversion layer and an imaging layer on a support are used. The multicolor imaging method comprises a step for superposing the imaging layer of each thermal transfer sheet and the image receiving layer of the image receiving sheet oppositely and irradiating it with laser light of multibeam two-dimensional arrangement from the support side of the thermal transfer sheet to transfer the region of the imaging layer irradiated with laser light onto the image receiving layer of the image receiving sheet thus recording an image. The imaging layer of a black thermal transfer sheet is thicker than the imaging layer of yellow, magenta and cyan thermal transfer sheets and the thickness is in the range of 0.5-0.7

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L4: Entry 1 of 2

File: JPAB

Dec 26, 2000

PUB-NO: JP02000355177A  
DOCUMENT-IDENTIFIER: JP 2000355177 A  
TITLE: THERMAL TRANSFER MATERIAL AND METHOD FOR LASER THERMAL TRANSFER RECORDING

PUBN-DATE: December 26, 2000

## INVENTOR-INFORMATION:

NAME

TAKAHASHI, YONOSUKE

COUNTRY

## ASSIGNEE-INFORMATION:

NAME

FUJI PHOTO FILM CO LTD

COUNTRY

APPL-NO: JP11167406

APPL-DATE: June 14, 1999

INT-CL (IPC): B41 M 5/40; B41 M 5/26

## ABSTRACT:

PROBLEM TO BE SOLVED: To provide a thermal transfer material capable of rapidly forming an image having a high definition and a high image quality by a high output laser with excellent adhesive properties to a thermal transfer material by rapidly vacuum evacuating at the time of laser thermal transfer recording and provide further a method for laser thermal transfer recording.

SOLUTION: In the thermal transfer material comprising a photothermal conversion layer and an image forming layer on a support, Smooster value of a surface of the forming layer is 2 mmHg or below, and a centerline mean surface roughness Ra is 0.03 to 0.2

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L4: Entry 2 of 2

File: DWPI

Dec 26, 2000

DERWENT-ACC-NO: 2001-205246

DERWENT-WEEK: 200203

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TITLE: Thermal transfer material for printer, consists of thermal conversion layer and image forming layer which has specific smoothness and average surface roughness

INVENTOR: TAKAHASHI, Y

PATENT-ASSIGNEE:

ASSIGNEE

FUJI PHOTO FILM CO LTD

CODE

FUJF

PRIORITY-DATA: 1999JP-0167406 (June 14, 1999)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP <u>2000355177</u> A	December 26, 2000		014	B41M005/40
US 6326121 B1	December 4, 2001		000	G03F007/34

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
JP2000355177A	June 14, 1999	1999JP-0167406	
US 6326121B1	June 13, 2000	2000US-0592811	

INT-CL (IPC): B41 J 2/435; B41 M 5/26; B41 M 5/40; G03 B 27/60; G03 F 7/09; G03 F 7/34

ABSTRACTED-PUB-NO: JP2000355177A

BASIC-ABSTRACT:

NOVELTY - Light and heat conversion layer and an image forming layer formed on the support structure, are laminated. The smoothness of the image forming layer surface is 2 mmHgs or less and its central line average surface roughness Ra' is 0.03-0.2 mu m. The liquid applied for lamination has pigment particles in which particles size of 3% of particles in total weight is 1 mu m or more.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for laser thermal transfer recording method which involves irradiating multi-mode semiconductor laser on the thermal conversion layer whose material is adhered to image forming layer material by vacuum pressure reduction method, to form the image in the image forming layer during which the lamination and thermal transfer layer are peeled off.

USE - For printer, recorder, facsimile connected to computer. Also for medical treatment.

ADVANTAGE - Gap between thermal transfer image receiver material is not generated, by performing uniform adhesion, thereby image is uniformly transferred from the layer. High resolution image is formed at high speed by using multi-mode semiconductor laser.

ABSTRACTED-PUB-NO:

US 6326121B

## EQUIVALENT-ABSTRACTS:

NOVELTY - Light and heat conversion layer and an image forming layer formed on the support structure, are laminated. The smoothness of the image forming layer surface is 2 mmHgs or less and its central line average surface roughness Ra' is 0.03-0.2  $\mu$  m. The liquid applied for lamination has pigment particles in which particles size of 3% of particles in total weight is 1  $\mu$  m or more.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for laser thermal transfer recording method which involves irradiating multi-mode semiconductor laser on the thermal conversion layer whose material is adhered to image forming layer material by vacuum pressure reduction method, to form the image in the image forming layer during which the lamination and thermal transfer layer are peeled off.

USE - For printer, recorder, facsimile connected to computer. Also for medical treatment.

ADVANTAGE - Gap between thermal transfer image receiver material is not generated, by performing uniform adhesion, thereby image is uniformly transferred from the layer. High resolution image is formed at high speed by using multi-mode semiconductor laser.

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS: THERMAL TRANSFER MATERIAL PRINT CONSIST THERMAL CONVERT LAYER IMAGE FORMING LAYER SPECIFIC SMOOTH AVERAGE SURFACE ROUGH

DERWENT-CLASS: G05 P75 P82 P84 T04

CPI-CODES: G05-F01;

EPI-CODES: T04-G03B;

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C2001-061354

Non-CPI Secondary Accession Numbers: N2001-146698

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Dec 26, 2000

L4: Entry 1 of 2

File: JPAB

PUB-NO: JP02000355177A  
DOCUMENT-IDENTIFIER: JP 2000355177 A  
TITLE: THERMAL TRANSFER MATERIAL AND METHOD FOR LASER THERMAL TRANSFER RECORDING

PUBN-DATE: December 26, 2000

INVENTOR-INFORMATION:

COUNTRY

NAME

TAKAHASHI, YONOSUKE

ASSIGNEE-INFORMATION:

COUNTRY

NAME

FUJI PHOTO FILM CO LTD

APPL-NO: JP11167406

APPL-DATE: June 14, 1999

INT-CL (IPC): B41 M 5/40; B41 M 5/26

ABSTRACT:

PROBLEM TO BE SOLVED: To provide a thermal transfer material capable of rapidly forming an image having a high definition and a high image quality by a high output laser with excellent adhesive properties to a thermal transfer material by rapidly vacuum evacuating at the time of laser thermal transfer recording and provide further a method for laser thermal transfer recording.

SOLUTION: In the thermal transfer material comprising a photothermal conversion layer and an image forming layer on a support, Smooster value of a surface of the forming layer is 2 mmHg or below, and a centerline mean surface roughness Ra is 0.03 to 0.2

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L4: Entry 2 of 2

File: DWPI

Dec 26, 2000

DERWENT-ACC-NO: 2001-205246

DERWENT-WEEK: 200203

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TITLE: Thermal transfer material for printer, consists of thermal conversion layer and image forming layer which has specific smoothness and average surface roughness

INVENTOR: TAKAHASHI, Y

PATENT-ASSIGNEE:

ASSIGNEE

FUJI PHOTO FILM CO LTD

CODE

FUJF

PRIORITY-DATA: 1999JP-0167406 (June 14, 1999)

## PATENT-FAMILY:

PUB-NO

JP 2000355177 A

US 6326121 B1

PUB-DATE

December 26, 2000

December 4, 2001

LANGUAGE

PAGES

014

000

MAIN-IPC

B41M005/40

G03F007/34

## APPLICATION-DATA:

PUB-NO

JP2000355177A

US 6326121B1

APPL-DATE

June 14, 1999

June 13, 2000

APPL-NO

1999JP-0167406

2000US-0592811

DESCRIPTOR

INT-CL (IPC): B41 J 2/435; B41 M 5/26; B41 M 5/40; G03 B 27/60; G03 F 7/09; G03 F 7/34

ABSTRACTED-PUB-NO: JP2000355177A

## BASIC-ABSTRACT:

NOVELTY - Light and heat conversion layer and an image forming layer formed on the support structure, are laminated. The smoothness of the image forming layer surface is 2 mmHgs or less and its central line average surface roughness Ra' is 0.03-0.2 mu m. The liquid applied for lamination has pigment particles in which particles size of 3% of particles in total weight is 1 mu m or more.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for laser thermal transfer recording method which involves irradiating multi-mode semiconductor laser on the thermal conversion layer whose material is adhered to image forming layer material by vacuum pressure reduction method, to form the image in the image forming layer during which the lamination and thermal transfer layer are peeled off.

USE - For printer, recorder, facsimile connected to computer. Also for medical treatment.

ADVANTAGE - Gap between thermal transfer image receiver material is not generated, by performing uniform adhesion, thereby image is uniformly transferred from the layer. High resolution image is formed at high speed by using multi-mode semiconductor laser.

ABSTRACTED-PUB-NO:

US 6326121B

ALENT-ABSTRACTS:

ELTY - Light and heat conversion layer and an image forming layer formed on the support structure, are laminated. The smoothness of the image forming layer surface is  $0.03-0.2 \mu m$  or less and its central line average surface roughness  $Ra'$  is  $0.03-0.2 \mu m$ . The liquid applied for lamination has pigment particles in which particles size of 3% of particles in total weight is  $1 \mu m$  or more.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for laser thermal transfer recording method which involves irradiating multi-mode semiconductor laser on the thermal conversion layer whose material is adhered to image forming layer material by vacuum pressure reduction method, to form the image in the image forming layer during which the lamination and thermal transfer layer are peeled off.

USE - For printer, recorder, facsimile connected to computer. Also for medical treatment.

ADVANTAGE - Gap between thermal transfer image receiver material is not generated, by performing uniform adhesion, thereby image is uniformly transferred from the layer. High resolution image is formed at high speed by using multi-mode semiconductor laser.

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS: THERMAL TRANSFER MATERIAL PRINT CONSIST THERMAL CONVERT LAYER IMAGE FORMING LAYER SPECIFIC SMOOTH AVERAGE SURFACE ROUGH

DERWENT-CLASS: G05 P75 P82 P84 T04

CPI-CODES: G05-F01;

EPI-CODES: T04-G03B;

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C2001-061354

Non-CPI Secondary Accession Numbers: N2001-146698



# WEST

Print

File: JPAB

Dec 26, 2000

PUBN-DATE: December 26, 2000

COUNTRY

NAME  
TAKAHASHI, YONOSUKE

COUNTRY

NAME  
FUJI PHOTO FILM CO LTD

APPL-NO: JP11187400  
APPL-DATE: June 14, 1999

ABSTRACT:

SOLUTION: In the thermal transfer material comprising a photothermal conversion layer and an image forming layer on a support, Smoother value of a surface of the forming layer is 2 mmHg or below, and a centerline mean surface roughness Ra is 0.03 to 0.2

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L2: Entry 2 of 2

File: JPAB

Nov 6, 2001

PUB-NO: JP02001310491A  
DOCUMENT-IDENTIFIER: JP 2001310491 A  
TITLE: IMAGING METHOD

PUBN-DATE: November 6, 2001

## INVENTOR-INFORMATION:

NAME

COUNTRY

KONNO, TAKESHI

HATAKEYAMA, AKIRA

KAWAGOE, SHIGEKI

## ASSIGNEE-INFORMATION:

NAME

COUNTRY

FUJI PHOTO FILM CO LTD

APPL-NO: JP2000129445

APPL-DATE: April 28, 2000

INT-CL (IPC): B41 J 2/32; B41 M 5/26; B41 M 5/40

## ABSTRACT:

PROBLEM TO BE SOLVED: To provide an imaging method in which a high resolution image having good image quality and no reverse, and a transfer image having a good color tone can be formed without providing a transfer material or an image receiving material with a cushion layer.

SOLUTION: The coloring material layer side of a transfer material comprising a translucent support, a translucent conductive layer, a photothermal conversion layer and a coloring material layer is charged by corona discharge and superposed on the image receiving layer side of an image receiving material comprising a support and an image receiving layer. Laser light is then irradiated imagewise from the transfer material side and the coloring material layer of transfer material is transferred to the surface of the image receiving layer thus forming an image on the surface of the image receiving layer.

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